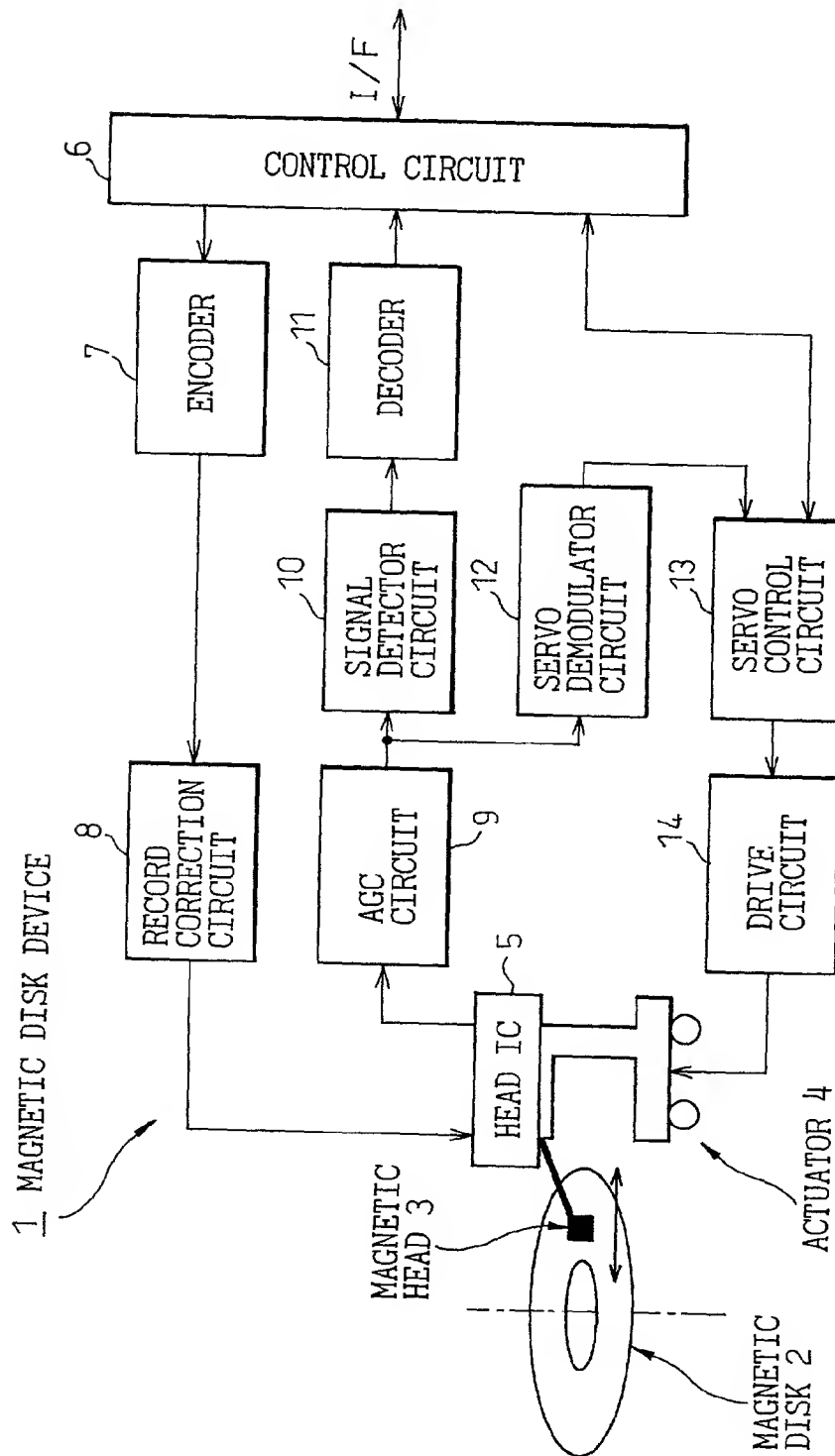


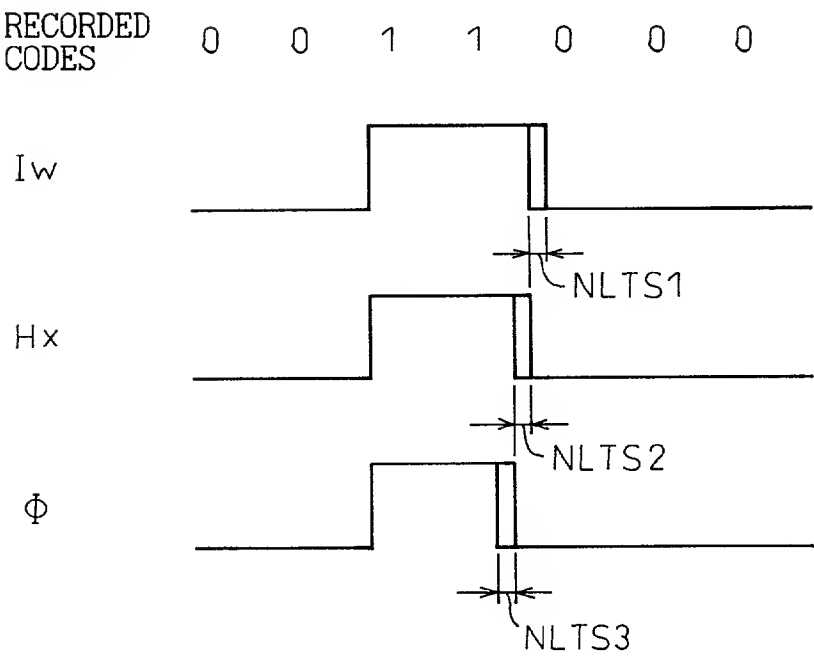
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Fig.1



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Fig.2



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Fig.3

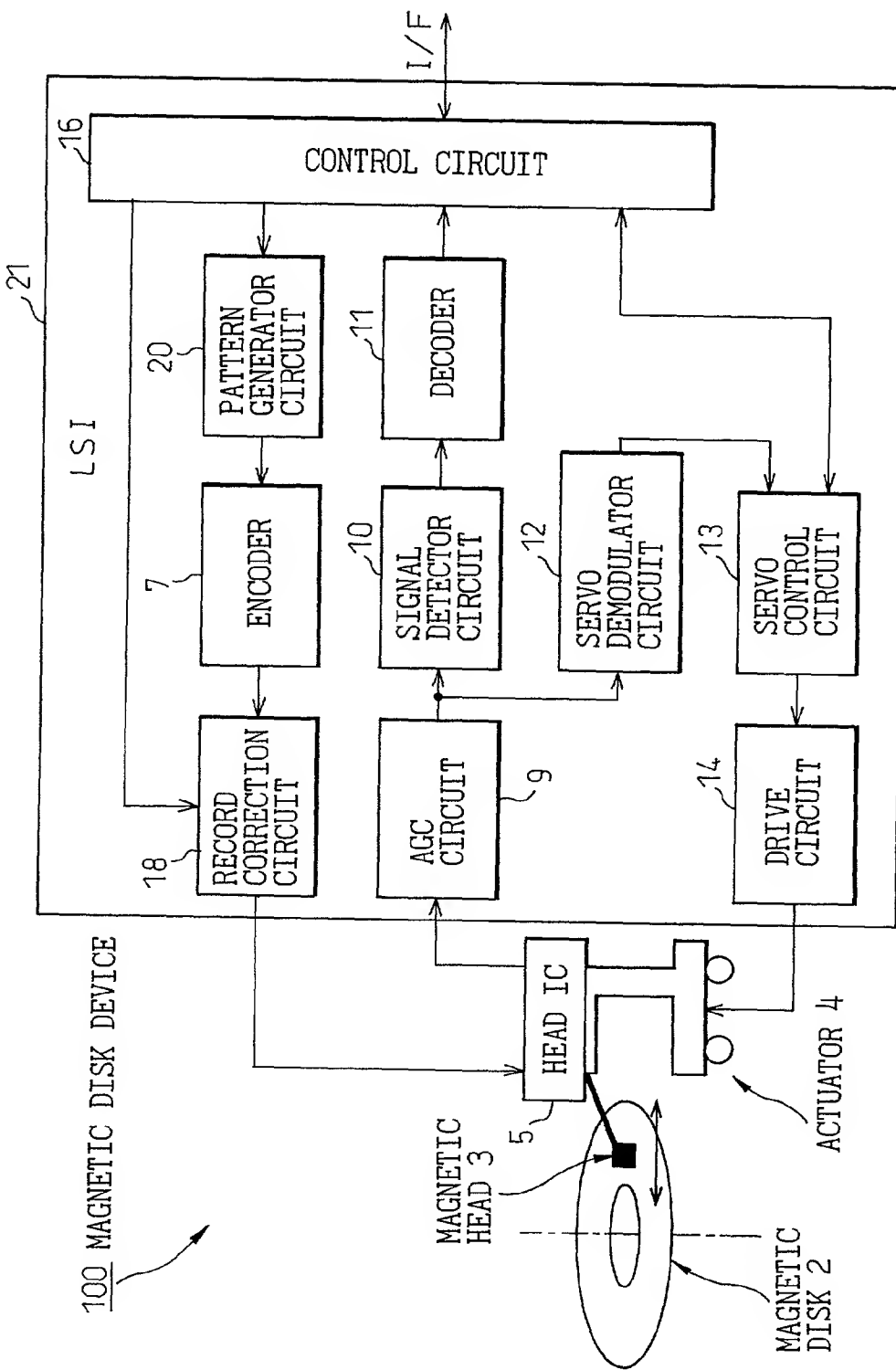


FIG. 3

Fig.4

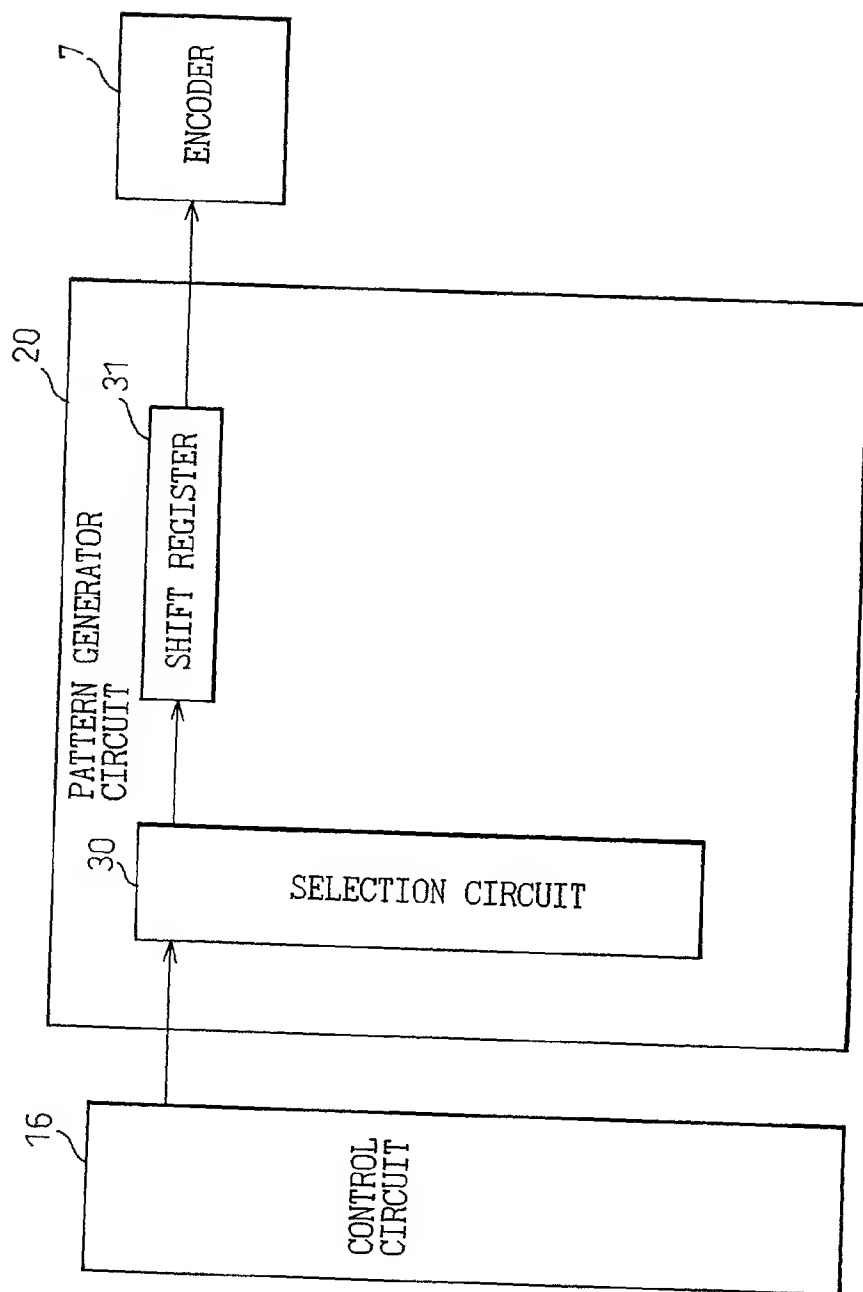
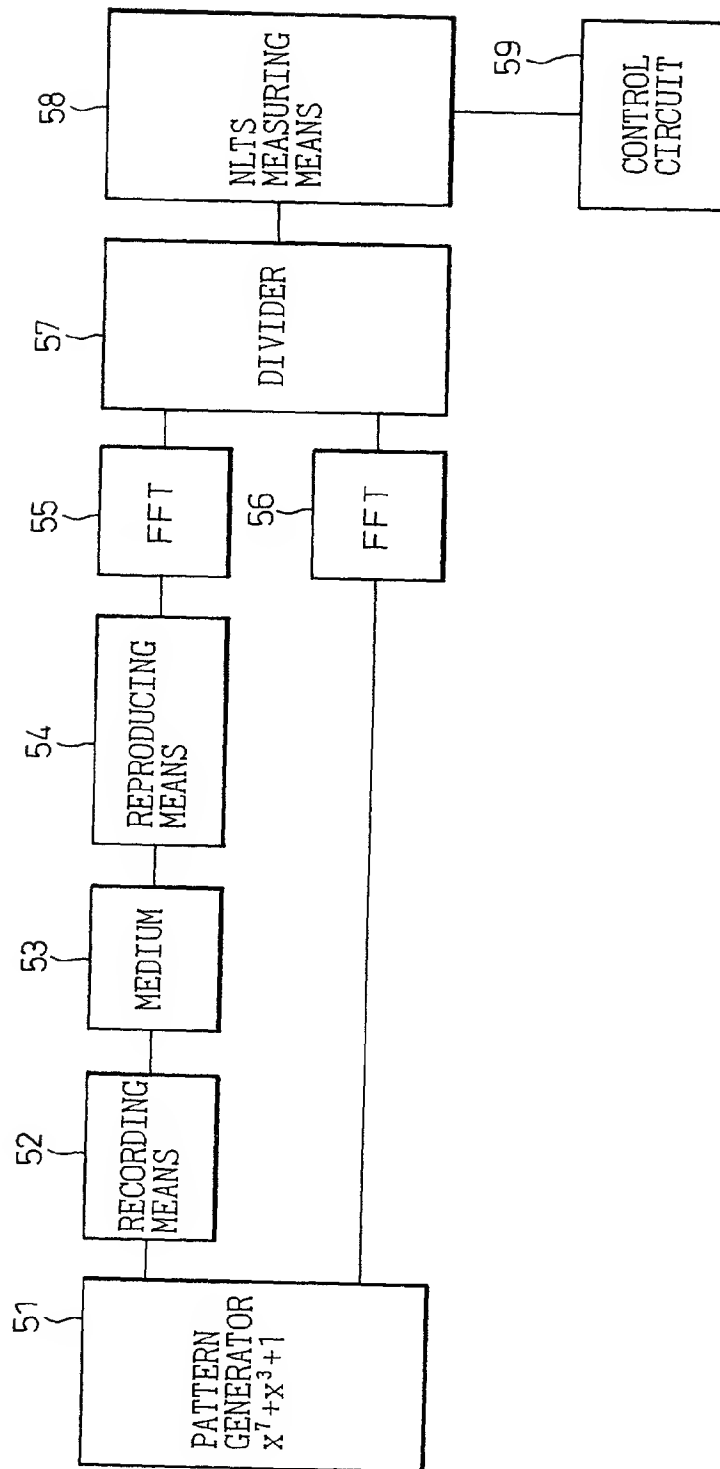
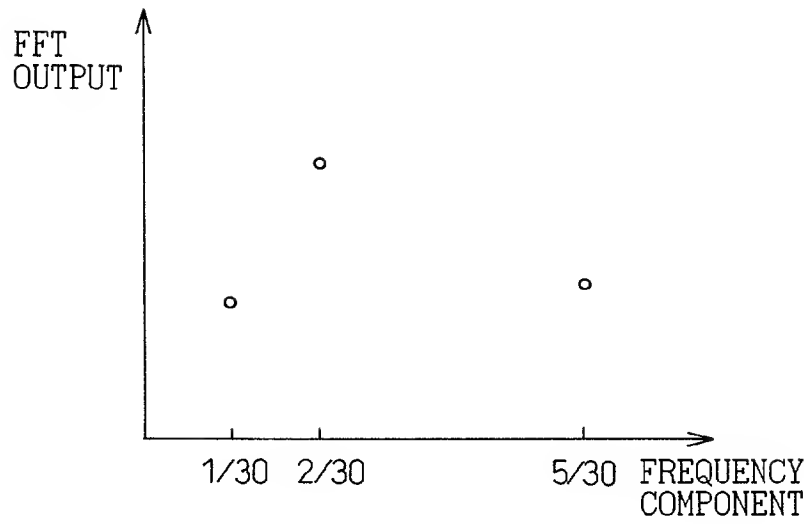


Fig.5



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Fig.6



REF ID: A62650

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Fig.7A

KIND OF NLTS MEASUREMENT		RECORDING PATTERN A (NRZI NOTATION)																														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
TO-BE- MEASURED PATTERNS	DIBIT (ORIGINAL)	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	TRIBIT (BIPOLAR)	1	1	1	0	0	0	1	1	0	1	0	0	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	2T (BIPOLAR)	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
	HTS (O/WNLTS)	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
REFERENCE PATTERN	REF (COMMON)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*1

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Fig.7B

*1

NLTS	ABSOLUTE ERROR BY ASYM
AVERAGE BIPOLAR NLTS VALUE OF DIBIT	- 5%
AVERAGE BIPOLAR NLTS VALUE OF TRIBIT	+ 5%
AVERAGE BIPOLAR NLTS VALUE OF 2T PATTERN	- 5%
UNIPOLAR NLTS	LESS THAN 5%

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Fig.8A

*2

KIND OF NLTS MEASUREMENT	V5pat	V5ref
DIBIT (ORIGINAL)	$[1 + \exp(-j * \text{PI}/3 * \text{ow})] * [1 + \exp(-j * \text{PI}/3 * 2) - \exp(-j * \text{PI}/3 * (1 - \text{nltS}))]$	$[1 + \exp(-j * \text{PI}/3 * \text{ow})]$
TRIBIT (BIPOLAR)	$[1 + \exp(-j * \text{PI}/3 * \text{ow})] * [1 + \exp(-j * \text{PI}/3 * (2 - \text{nltS}))]$	
2T (BIPOLAR)	$[1 + \exp(-j * \text{PI}/3 * \text{ow})] * [1 + \exp(-j * \text{PI}/3 * 2) - \exp(-j * \text{PI}/3 * (2 - \text{nltS}))]$	
HTS (O/WNLTS)	$[1 - \exp(-j * \text{PI}/3 * \text{ow})] * \exp(-j * \text{PI}/3)$	

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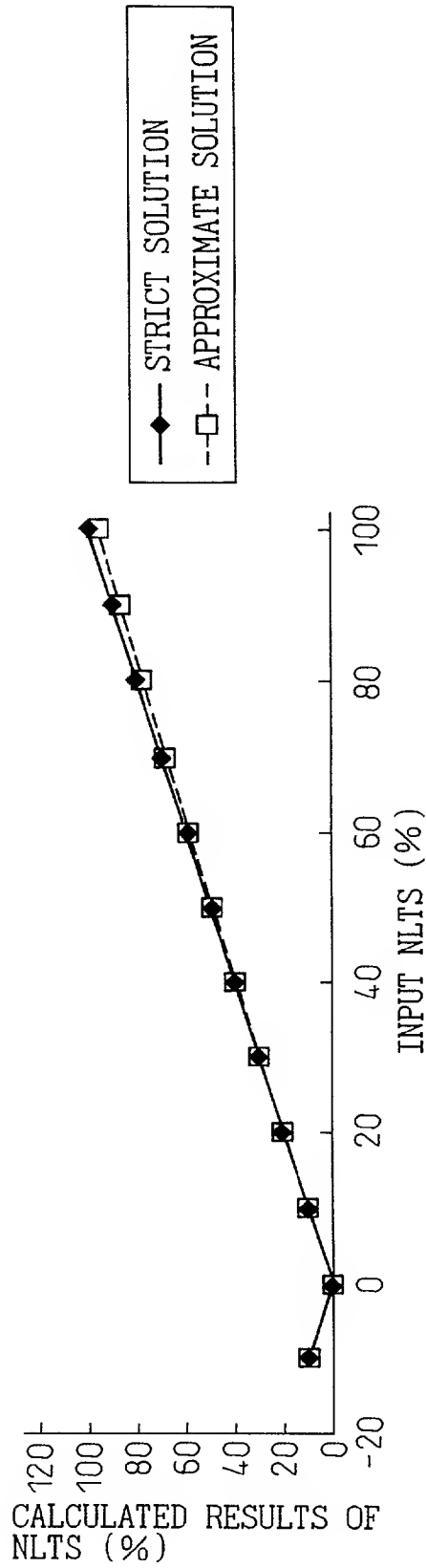
Fig.8B

*2

(V5 _{pat} /V5 _{ref})=Vab	FORMULAS FOR NLTS CALCULATION	
	STRICT SOLUTION	APPROXIMATE SOLUTION
$ 1 + \exp(-j * \text{PI}/3 * \text{nltts}) $	$\text{acos}[(2 - \text{Vab}^2)/2] * 3/\text{PI}$	$\text{Vab} * 3/\text{PI}$
$ 1 + \exp[-j * \text{PI}/3 * (2 - \text{nltts})] $	$2 - \text{acos}[(\text{Vab}^2 - 2)/2] * 3/\text{PI}$	-
$ 1 - \exp[-j * \text{PI}/3 * (1 - \text{nltts})] $	$1 - \text{acos}[(2 - \text{Vab}^2)/2] * 3/\text{PI}$	$1 - \text{Vab} * 3/\text{PI}$
$ 1 - \exp(-j * \text{PI}/3 * \text{ow}) / 1 + \exp(-j * \text{PI}/3 * \text{ow}) $	$\text{acos}[(1 - \text{Vab}^2)/(1 + \text{Vab}^2)] * 3/\text{PI}$	$\text{Vab} * 6/\text{PI}$

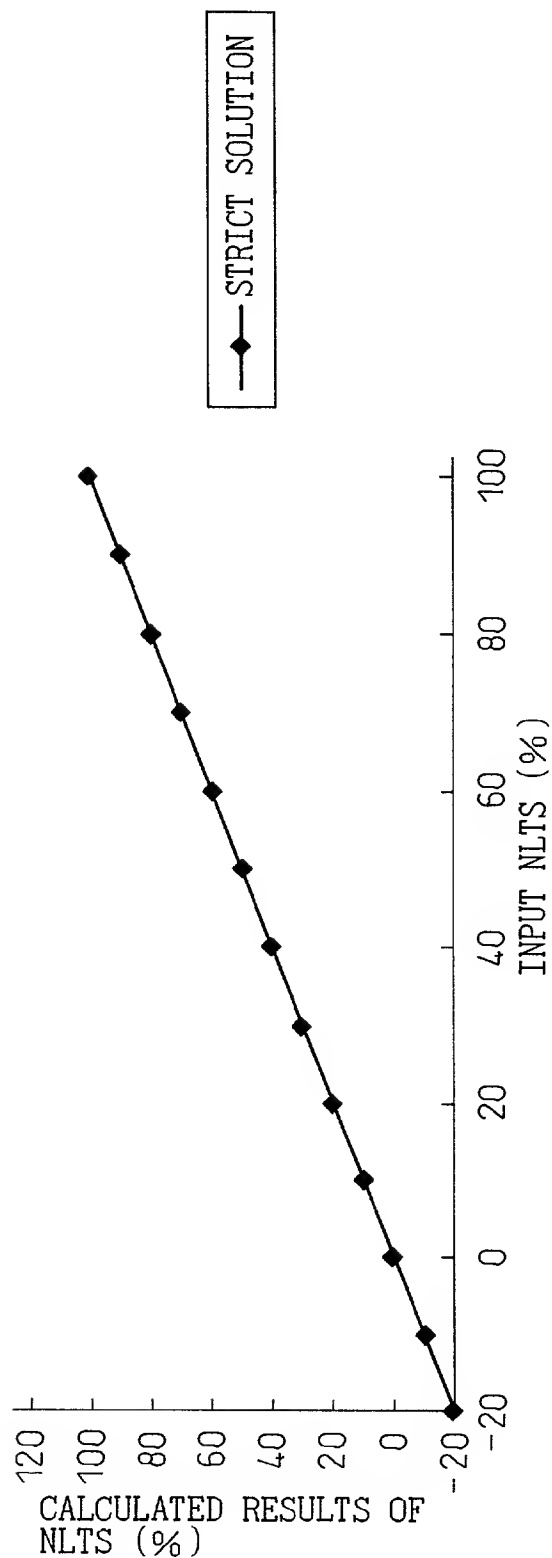
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Fig.9



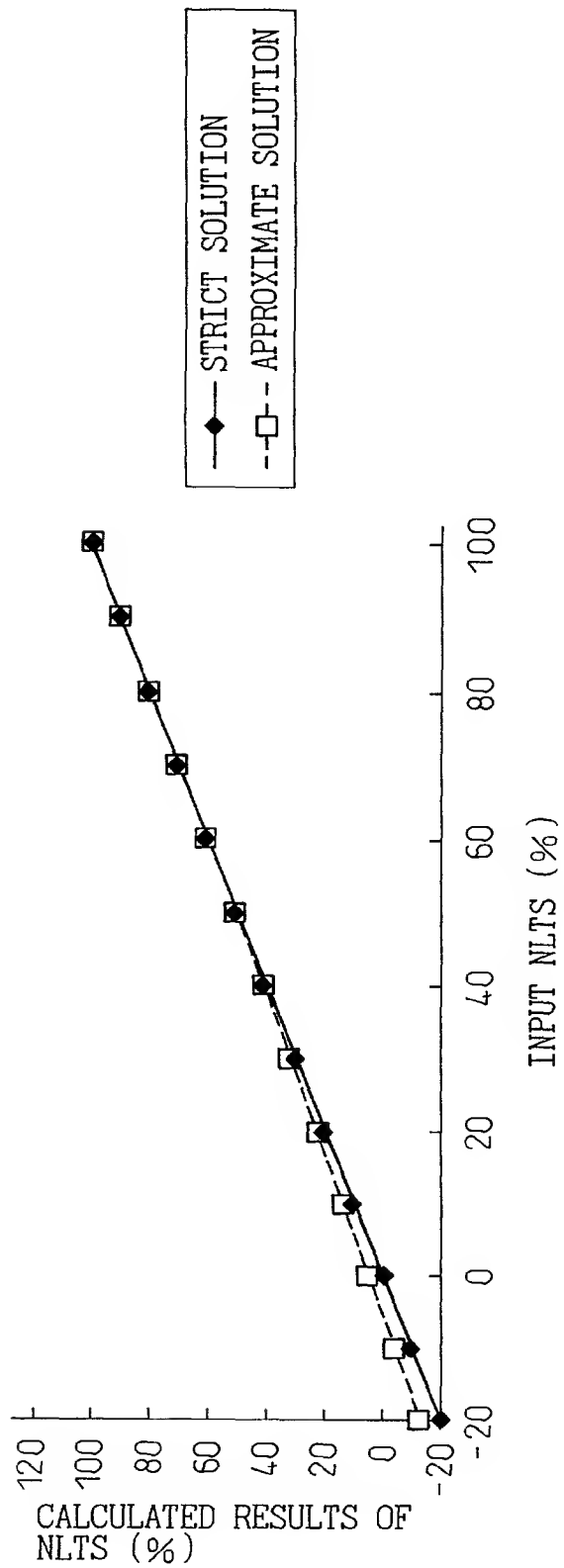
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Fig.10



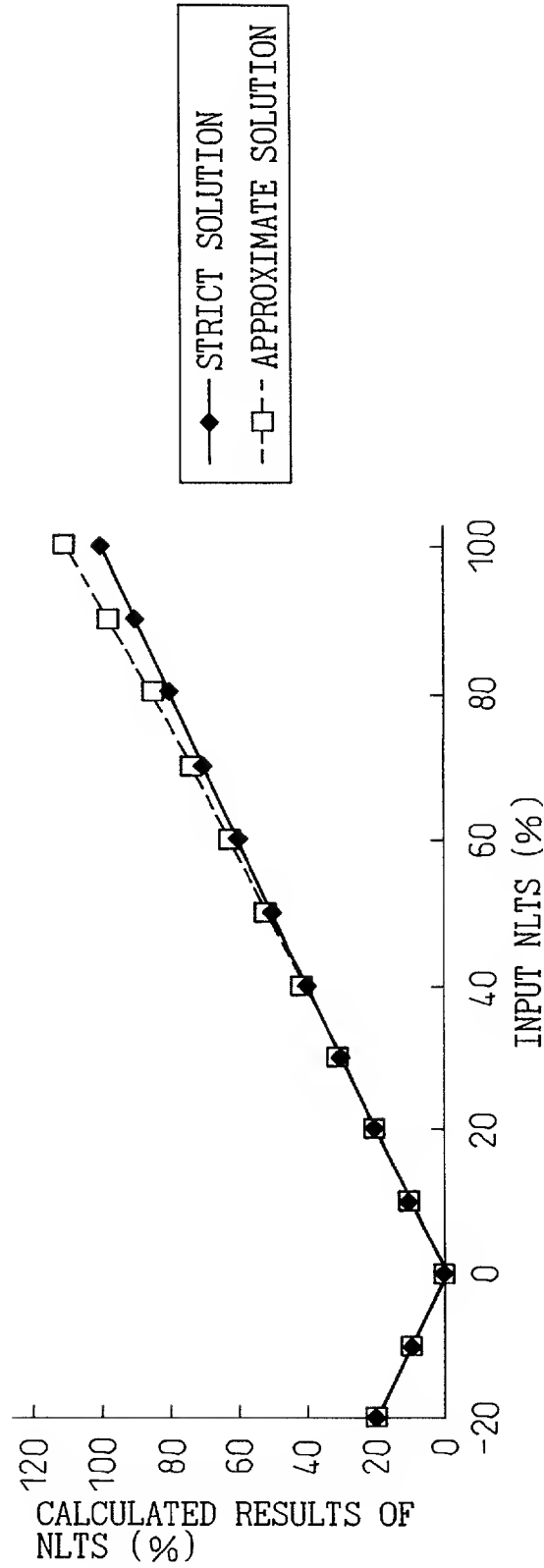
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Fig.11



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Fig.12



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Fig.13A

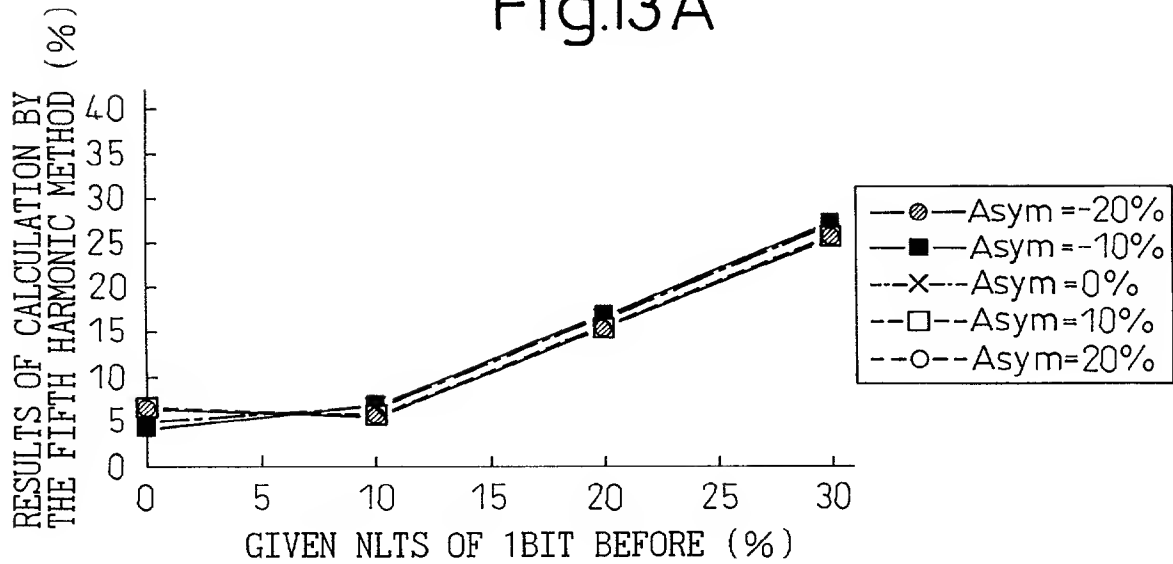
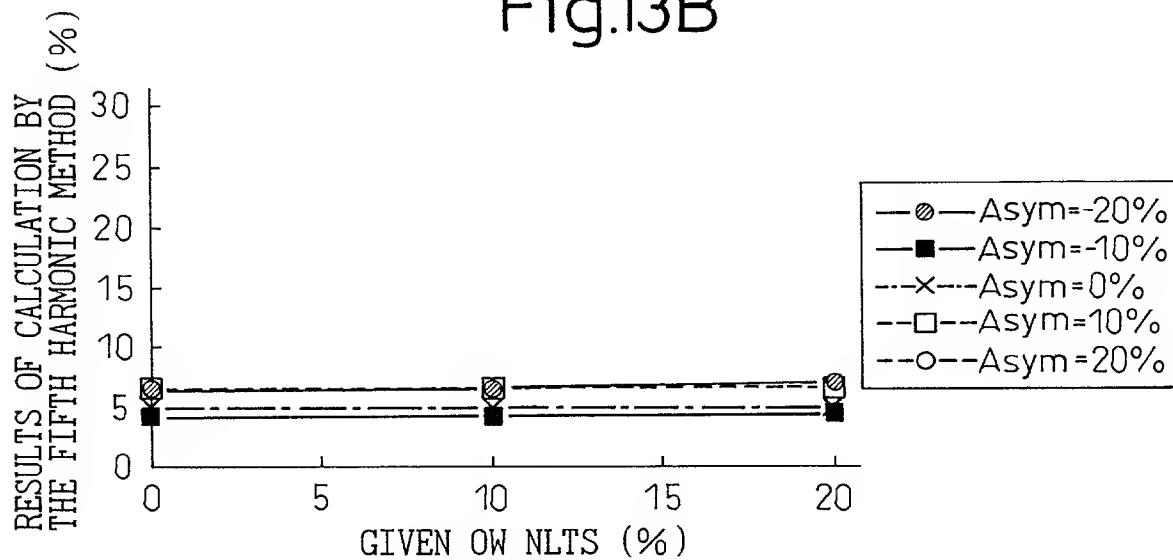


Fig.13B



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Fig.14A

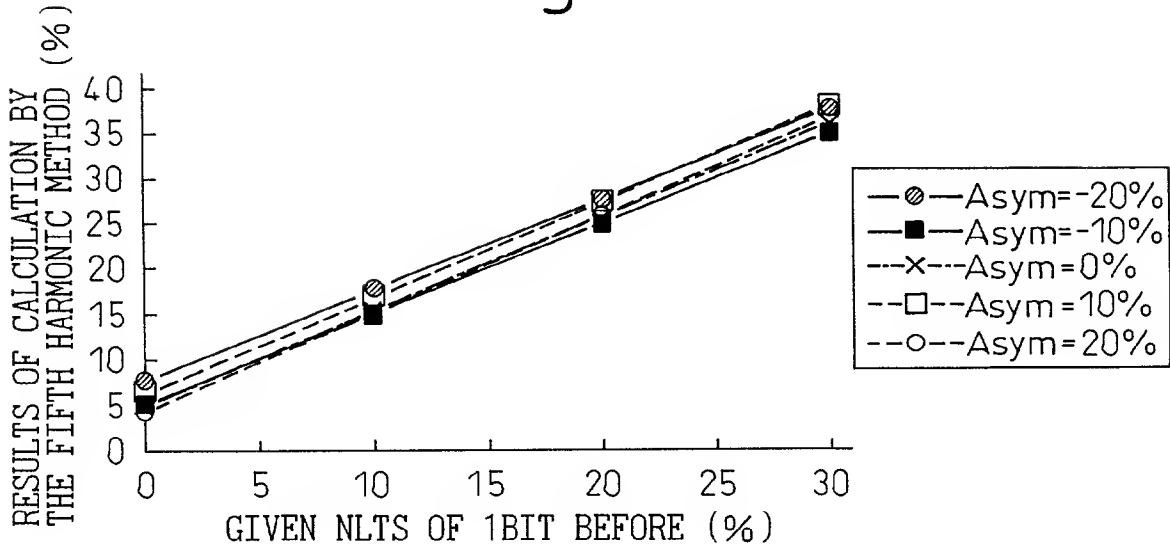


Fig.14B

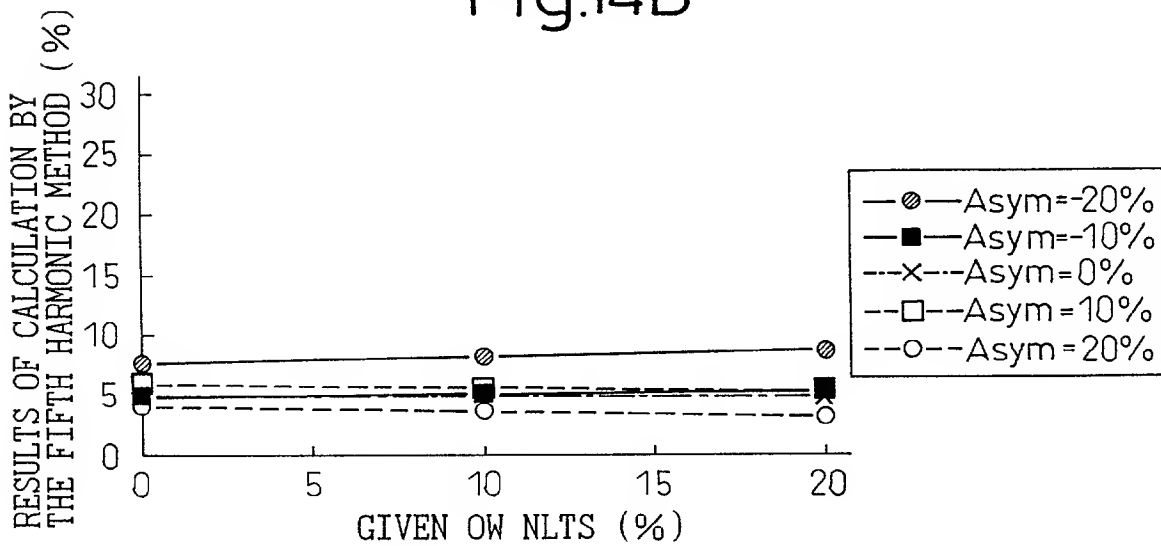


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Fig.15A

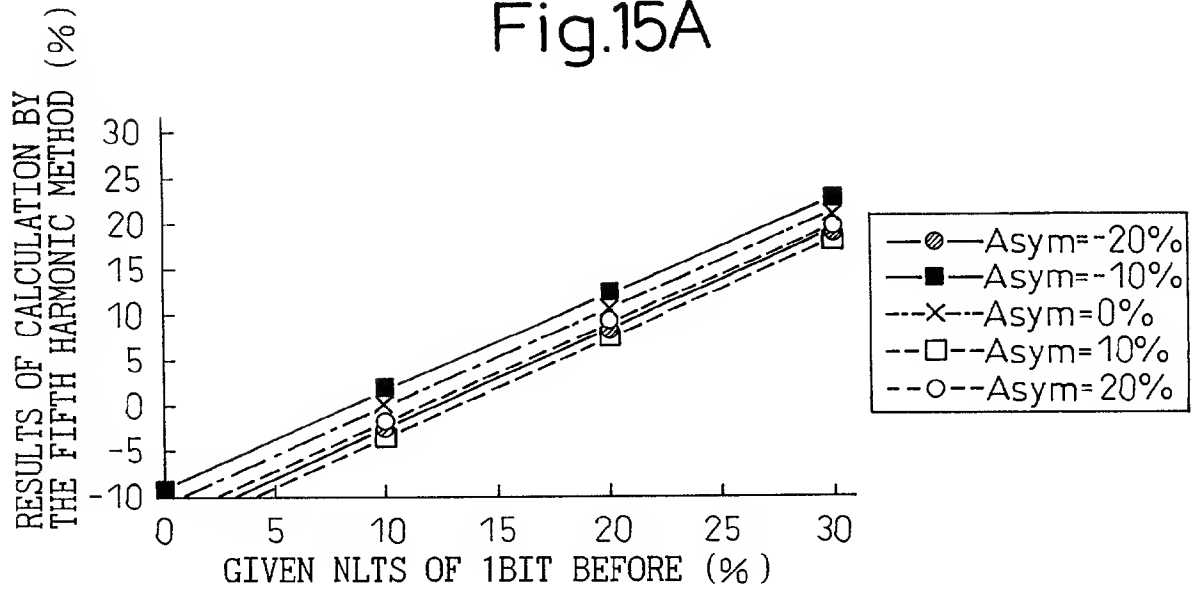
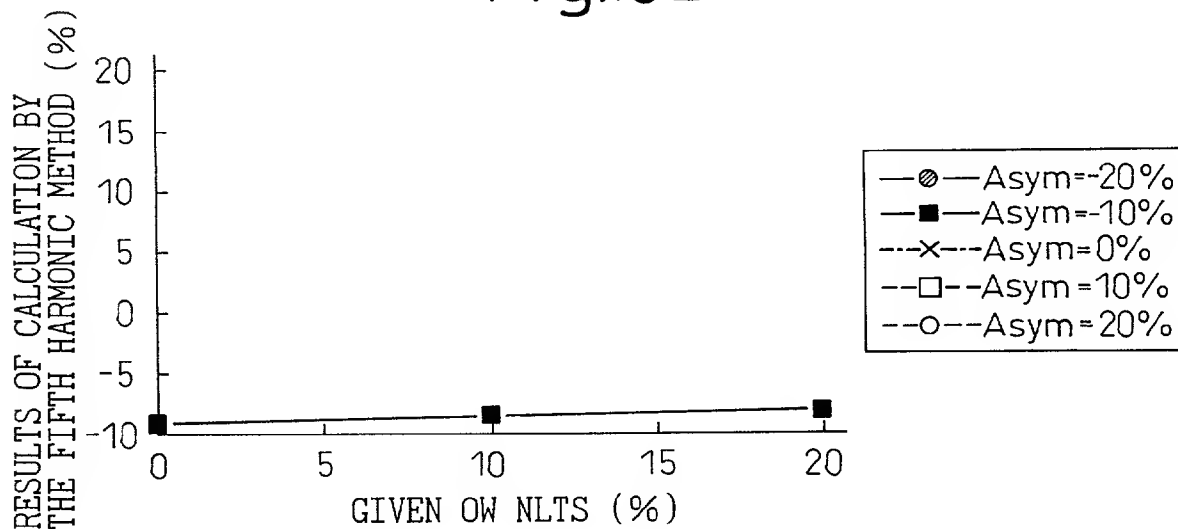


Fig.15B



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Fig.16A

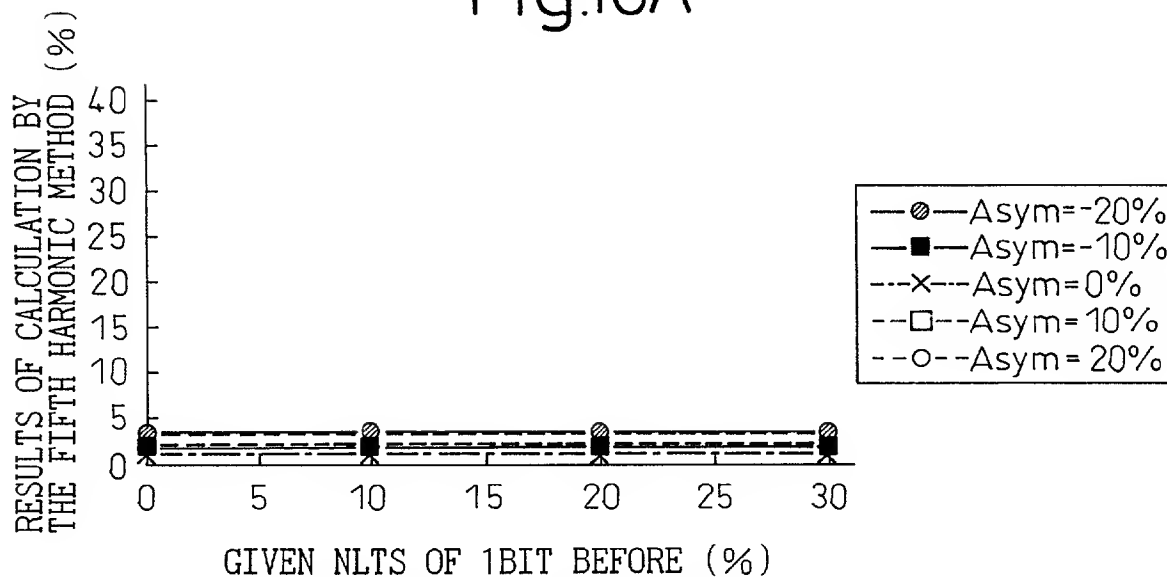


Fig.16B

